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10/657,261	09/09/2003	Soo Hwan Kim	P56945	4035

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EXAMINER	
NGUYEN, KHAI MINH	
ART UNIT	PAPER NUMBER
2617	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/657,261	KIM ET AL.	
	Examiner	Art Unit	
	Khai M. Nguyen	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/6/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's argument with respect to claim 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suda (U.S.Pat-6122518) in view of Ihara et al. (U.S.Pat-6366773).

Regarding claim 1, Suda teaches a method for performing a call processing operation to manage state information of access nodes in a high-speed wireless data system (fig.1, PHS base stations 2-1, 2-2, mobile stations 6-1,6-2, 6-3, 6-4, switching network 1), comprising the steps of:

when an access node (fig.1, mobile stations 6-1, PHS base stations 2-1) coupled to a wireless private network makes a request for a call connection with another access node (col.3, lines 11-29) coupled to the wireless private network (fig.1, control unit 4, switching network 1, col.2, lines 52-58, col.3, lines 11-14), carrying out a call connection between the access nodes (fig.1, control unit 4, switching network 1, col.2, lines 52-58, col.3, lines 11-14); and

updating state information of the access nodes according to the call connection (fig.4-8d, col.3, lines 1-47) and connection release between the access nodes (fig.4-8d, col.3, lines 1-47)

Suda fails to specifically disclose providing a high-speed wireless data service for the access nodes, and carrying out a call connection release after completing the high-speed wireless data service. However, Ihara teaches providing a high-speed wireless data service for the access nodes (abstract), and carrying out a call connection release after completing the high-speed wireless data service (abstract, col.6, lines 14-63). Therefore, it would have been obvious to one having ordinary skill in the art at the time invention was made to apply to teaching of Ihara to Suda to provide a technique of allowing a radio terminal that can be used both in a private branch exchange network and a public exchange network to terminate a call.

Regarding claim 2, Suda teaches a method for performing a call processing operation to manage state information of access nodes in a high-speed wireless data system (fig.1, PHS base stations 2-1, 2-2, mobile stations 6-1,6-2, 6-3, 6-4, switching network 1), comprising the steps of:

when an access node (fig.1, mobile stations 6-1, PHS base stations 2-1) coupled to a wireless private network makes a request for a call connection with another access node (col.3, lines 11-29) coupled to the wireless private network (fig.1, control unit 4, switching network 1, col.2, lines 52-58, col.3, lines 11-14),

updating state information of the access nodes to busy state information (fig.4-8d, col.3, lines 1-47); and

updating the state information of the access nodes to idle state information according to the call connection release (fig.4-8d, col.3, lines 1-47).

Suda fails to specifically disclose carrying out a call connection between the access nodes and providing a high-speed wireless data service for the access nodes; when the high-speed wireless data service for the access nodes is completed, carrying out a call connection release. However, Ihara teaches carrying out a call connection between the access nodes (abstract, col.6, lines 14-63) and providing a high-speed wireless data service for the access nodes (abstract); when the high-speed wireless data service for the access nodes is completed (abstract, col.6, lines 14-63), carrying out a call connection release (abstract, col.6, lines 14-63). Therefore, it would have been obvious to one having ordinary skill in the art at the time invention was made to apply to teaching of Ihara to Suda to provide a technique of allowing a radio terminal that can be used both in a private branch exchange network and a public exchange network to terminate a call.

Regarding claim 3, Suda teaches a method for performing a call processing operation to manage state information of access nodes in a high-speed wireless data system (fig.1, PHS base stations 2-1, 2-2, mobile stations 6-1,6-2, 6-3, 6-4, switching network 1), comprising the steps of:

when an access node (fig.1, mobile stations 6-1, PHS base stations 2-1) coupled to a wireless private network makes a request for a call connection with another access node (col.3, lines 11-29) coupled to the wireless private network (fig.1, control unit 4, switching network 1, col.2, lines 52-58, col.3, lines 11-14),

allowing the private access network controller to request that state information of the access nodes be updated (fig.4-8d, col.3, lines 1-47);

allowing a data location register to update the state information of the access nodes to busy state information according to a state information update request (fig.4-8d, col.3, lines 1-47);

allowing the data location register to update the state information of the access nodes to idle state information according to another state information update request (fig.4-8d, col.3, lines 1-47).

Suda fails to specifically disclose allowing a private access network controller to carry out a call connection between the access nodes and to provide a high-speed wireless data service for the access nodes; when the high-speed wireless data service for the access nodes is completed, carrying out a call connection release between the access nodes and allowing the private access network controller to request that the state information of the access nodes be updated. However, Ihara teaches allowing a private access network controller to carry out a call connection between the access nodes and to provide a high-speed wireless data service for the access nodes (abstract, col.6, lines 14-63); when the high-speed wireless data service for the access nodes is

completed (abstract), carrying out a call connection release between the access nodes and allowing the private access network controller to request that the state information of the access nodes be updated (abstract, col.6, lines 14-63). Therefore, it would have been obvious to one having ordinary skill in the art at the time invention was made to apply to teaching of Ihara to Suda to provide a technique of allowing a radio terminal that can be used both in a private branch exchange network and a public exchange network to terminate a call.

Regarding claim 4, Suda and Ihara further teach the method of claim 3, with the data location register storing (see Suda, fig.1, memory 5) the information associated with the access node requesting for the call connection being equal to the information associated with the other access node (see Suda, col.2, line 52 to col.3, line 14).

Regarding claim 5, Suda and Ihara further teach the method of claim 4, with the private access network controller and the data location register being configured to being based on an Internet protocol (see Suda, col.2, line 52 to col.3, line 14).

Regarding claim 6, Suda and Ihara further teach the method of claim 5, with the private access network controller sending a state information update request message incIharading current state information of the originating access node (see Suda, fig.4-8d, col.3, lines 1-47) and the terminating access node to the data location register (see Suda, fig.4-8d, col.3, lines 1-47).

Regarding claim 7, Suda and Ihara further teach the method of claim 5, with the private access network controller sending a request message indicating the state

information of the originating access node (see Suda, fig.4-8d, col.2, line 52 to col.3, lines 47) and the terminating access node to be updated to busy state information (see Suda, fig.4-8d, col.3, lines 1-47) and the data location register searching for the subscriber information upon receiving the state information update request (see Suda, fig.4-8d, col.2, line 52 to col.3, lines 47) and updating the access node state information to busy state information (see Suda, fig.4-8d, col.3, lines 1-47).

Regarding claim 8, Suda teaches a wireless data system (fig.1), comprising:

a first access node (fig.1, mobile stations 6-1, PHS base stations 2-1) receiving a first network service (fig.1, fig.1, control unit 4, switching network 1, col.2, lines 52-58, col.3, lines 11-14);

a first private access network (fig.1, control unit 4, switching network 1, col.1, lines 26-36) transceiver system setting up a session when the first access node moves within the wireless service area of the first private access network transceiver (fig.4-8d, control unit 4, switching network 1, col.2, line 52 to col.3, line 14);

a private access network controller (fig.1, control unit 4, switching network 1, control unit 4, memory 5) carrying out a call connection between the access nodes (col.3, lines 29) and to provide data service for the first and second access nodes (col.2, line 52 to col.3, line 14) when the first access node makes a request for a call connection with the second access node coupled to the first network service (col.2, line 52 to col.3, line 14) and the private access network controller requesting the state

information of the first and second access nodes to be updated (fig.4-8d, col.3, lines 1-47).

Suda fails to specifically disclose a second access node receiving a second network service; and a second private access network transceiver system setting up a session when the second access node moves within the wireless service area of the second private access network transceiver. However, Ihara teaches a second access node (nodes A-C) receiving a second network service (fig.7, abstract, col.11, line 1 to col.12, line 27); and a second private access network transceiver system setting up a session when the second access node moves within the wireless service area of the second private access network transceiver (fig.7, abstract, col.11, line 1 to col.12, line 27). Therefore, it would have been obvious to one having ordinary skill in the art at the time invention was made to apply to teaching of Ihara to the teaching of Suda to expand the coverage area of PBX.

Regarding claim 9, Suda and Ihara further teach the system of claim 8, further comprising a data location register updating the state information of the access nodes to busy state information according to a state information update request (see Suda, fig.4-8d, col.3, lines 1-14).

Regarding claim 10, Suda and Ihara further teach the system of claim 9, with the private access network controller requesting that the state information of the access nodes be updated (see Suda, fig.4-8d, col.3, lines 1-47), and carrying out a call

connection release between the access nodes when the data service for the access nodes is completed (see Suda, fig.4-8d, col.3, lines 1-47).

Regarding claim 11, Suda and Ihara further teach the system of claim 10, with the data location register updating the state information of the access nodes to idle state information according to another state information update request (see Suda, fig.4-8d, col.3, lines 1-47).

Regarding claim 12, Suda and Ihara further teach the system of claim 11, with the first network service being a wireless private network (see Suda, fig.1, col.2, lines 26-33, see Ihara, fig.12).

Regarding claim 13, Suda and Ihara further teach the system of claim 12, with the second network service being a public land mobile network (see Suda, col.2, lines 52-58, see Ihara, fig.6a-7, public MSC 462, col.15, lines 19-30).

Regarding claim 14, Suda and Ihara further teach the system of claim 12, with the second network service being a public network (see Suda, col.2, lines 52-58, see Ihara, fig.6a-7, public MSC 462, col.15, lines 19-30).

Regarding claim 15, Suda and Ihara further teach the system of claim 13, with the data location register storing the information associated with the first access node of the wireless private network equal to the information associated with the second access node of the public land mobile network (see Suda, col.2, line 52 to col.3, line 14, see Ihara, fig.5a, col.12, line 64 to col.13, line 22).

Regarding claim 16, Suda and Ihara further teach the system of claim 15, with the private access network controller and the data location register being configured to being based on an Internet protocol (see Suda, col.2, line 52 to col.3, line 14).

Regarding claim 17, Suda and Ihara further teach the system of claim 16, with the private access network controller sending a request message indicating the state information of the originating access node (see Suda, fig.4-8d, col.3, lines 1-47, see Ihara, fig.20a, col.35, lines 46-52) and the terminating access node to be updated to busy state information (see Suda, fig.4-8d, col.3, lines 1-47) and the data location register searching for the subscriber information upon receiving the state information update request (see Suda, fig.4-8d, col.3, lines 1-47) and updating the access node state information to busy state information (see Suda, fig.4-8d, col.3, lines 1-47).

Regarding claim 18, Suda teaches computer-readable medium having computer-executable instructions for performing a method for performing a call processing operation to manage state information of access nodes in a high-speed wireless data system (fig.1, PHS base stations 2-1, 2-2, mobile stations 6-1,6-2, 6-3, 6-4, switching network 1), comprising:

when an access node (fig.1, mobile stations 6-1, PHS base stations 2-1) coupled to a wireless private network makes a request for a call connection with another access node (col.3, lines 11-29) coupled to the wireless private network (fig.1, control unit 4, switching network 1, col.2, lines 52-58, col.3, lines 11-14), carrying out a call connection

between the access nodes (fig.1, control unit 4, switching network 1, col.2, lines 52-58, col.3, lines 11-14); and

updating state information of the access nodes according to the call connection (fig.4-8d, col.3, lines 1-47) and connection release between the access nodes (fig.4-8d, col.3, lines 1-47).

Suda fails to specifically disclose providing a high-speed wireless data service for the access nodes, and carrying out a call connection release after completing the high-speed wireless data service. However, Ihara teaches providing a high-speed wireless data service for the access nodes (abstract), and carrying out a call connection release after completing the high-speed wireless data service (abstract, col.6, lines 14-63). Therefore, it would have been obvious to one having ordinary skill in the art at the time invention was made to apply to teaching of Ihara to Suda to provide a technique of allowing a radio terminal that can be used both in a private branch exchange network and a public exchange network to terminate a call.

Regarding claim 19, Suda teaches a computer-readable medium having computer-executable instructions for performing a method for performing a call processing operation to manage state information of access nodes in a high-speed wireless data system (fig.1, PHS base stations 2-1, 2-2, mobile stations 6-1,6-2, 6-3, 6-4, switching network 1, control unit 4, memory 5), comprising:

when an access node (fig.1, mobile stations 6-1, PHS base stations 2-1) coupled to a wireless private network makes a request for a call connection with another access

node (col.3, lines 11-29) coupled to the wireless private network (fig.1, control unit 4, switching network 1, col.2, lines 52-58, col.3, lines 11-14),

updating state information of the access nodes to busy state information (fig.4-8d, col.3, lines 1-47); and

updating the state information of the access nodes to idle state information according to the call connection release (fig.4-8d, col.3, lines 1-47).

Suda fails to specifically disclose carrying out a call connection between the access nodes and providing a high-speed wireless data service for the access nodes; when the high-speed wireless data service for the access nodes is completed, carrying out a call connection release. However, Ihara teaches carrying out a call connection between the access nodes (abstract, col.6, lines 14-63) and providing a high-speed wireless data service for the access nodes (abstract); when the high-speed wireless data service for the access nodes is completed (abstract, col.6, lines 14-63), carrying out a call connection release (abstract, col.6, lines 14-63). Therefore, it would have been obvious to one having ordinary skill in the art at the time invention was made to apply to teaching of Ihara to Suda to provide a technique of allowing a radio terminal that can be used both in a private branch exchange network and a public exchange network to terminate a call.

Regarding claim 20, Suda teaches a computer-readable medium having stored thereon a data structure for performing a call processing operation to manage state information of access nodes in a high-speed wireless data system (fig.1, PHS base

stations 2-1, 2-2, mobile stations 6-1,6-2, 6-3, 6-4, switching network 1, control unit 4, memory 5), comprising:

a first field containing data representing when an access node (fig.1, mobile stations 6-1, PHS base stations 2-1) coupled to a wireless private network makes a request for a call connection with another access node (col.3, lines 11-29) coupled to the wireless private network(fig.1, control unit 4, switching network 1, col.2, lines 52-58, col.3, lines 11-14);

a second field containing data representing allowing the private access network controller to request that state information of the access nodes be updated (fig.4-8d, col.3, lines 1-47);

a third field containing data representing allowing a data location register to update the state information of the access nodes to busy state information according to a state information update request (fig.4-8d, col.3, lines 1-47); and

a fifth field containing data representing allowing the data location register to update the state information of the access nodes to idle state information according to another state information update request (fig.4-8d, col.3, lines 1-47).

Suda fails to specifically disclose allowing a private access network controller to carry out a call connection between the access nodes and to provide a high-speed wireless data service for the access nodes; a fourth field containing data representing when the high-speed wireless data service for the access nodes is completed, carrying out a call connection release between the access nodes and allowing the private access

network controller to request that the state information of the access nodes be updated. However, Ihara teaches allowing a private access network controller to carry out a call connection between the access nodes and to provide a high-speed wireless data service for the access nodes (abstract, col.6, lines 14-63); a fourth field containing data representing when the high-speed wireless data service for the access nodes is completed (abstract), carrying out a call connection release between the access nodes and allowing the private access network controller to request that the state information of the access nodes be updated (abstract, col.6, lines 14-63). Therefore, it would have been obvious to one having ordinary skill in the art at the time invention was made to apply to teaching of Ihara to Suda to provide a technique of allowing a radio terminal that can be used both in a private branch exchange network and a public exchange network to terminate a call.

Regarding claim 21, Suda and Ihara further teach the method of claim 1, with a updating state information of the access nodes (see Suda, fig.4-8d, col.5, lines 13-23) accommodating a public network to recognize state information of a private network subscriber located in a private (see Suda, fig.4-8d, col.3, lines 1-47, col.5, lines 13-23) and public cell area (see Suda, col.2, lines 52-58) by transmitting terminal state information from the private network to the public network in a mobile communication system interworked with the public and private networks (see Suda, fig.4-8d, col.3, lines 1-47, col.5, lines 13-23).

Regarding claim 22 is rejected with the same reasons set forth in claim 21.

Regarding claim 23, Suda and Ihara further teach the computer-readable medium having computer-executable instructions for performing a method for performing a call processing operation to manage state information of access nodes in a high-speed wireless data system of claim 18, with said updating state information of the access nodes (see Suda, fig.1, fig.4-8d, col.5, lines 13-23) accommodating a public network to recognize state information of a private network subscriber located in a private (see Suda, fig.4-8d, col.3, lines 1-47, col.5, lines 13-23) and public cell area (see Suda, col.2, lines 52-58) by transmitting terminal state information from the private network to the public network in a mobile communication system inteworked with the public and private networks (see Suda, fig.4-8d, col.3, lines 1-47, col.5, lines 13-23).

Regarding claim 24 is rejected with the same reasons set forth in claim 23.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai M. Nguyen whose telephone number is 571.272.7923. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph feild can be reached on 571.272.4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Khai Nguyen
Au: 2617

JEAN GELIN
PRIMARY EXAMINER

12/28/2006